REMARKS

With respect to the election of species, applicant has noted that the Examiner has indicated that claims 1, 2 and 4 to 12 are readable on the elected species II. In the foregoing amendment, claims 13 to 26 have been identified as being withdrawn. Claim 3 has been cancelled.

With respect to the objection to the drawings, the Examiner will note that claim 12 has been deleted.

Concerning the claim objections, the Examiner will note that the correction in claim 4, line 4, pointed out by the Examiner has been made.

With respect to the rejection of the claims under 35 U.S.C. 112, claim 1 has been amended to remove the language "as large as possible." The claim has been amended to make it clear that the material of the first component which encloses the second component extends up to an injection location positioned at an end of the first component removed from the surface of the first component.

In addition, the wording "still formable" has been removed from claim 1.

With respect to the remaining changes made to claim 1, applicant points out that the word "tubular" inserted in line 1 of claim 1 can be found in original claim 2.

The compound HDPE is mentioned on page 12, second paragraph of the specification.

The feature inserted after line 18 of claim 1 is clearly shown in the drawing and supported by the specification.

The text added to the penultimate paragraph of claim 1 also can be found in Figs. 2 and 3 of the drawings of the application.

Reconsideration and withdrawal of the rejection of claims 1 and 2 under 35 U.S.C. 102(b) as being anticipated by Ticona, are respectfully requested.

Applicant submits that claim 1 as amended is patentable over the reference to Ticona.

The insertion of the language "on both the radially inner and outer surfaces of the second component from the surface of the first component" distinguishes claim 1 of the present application over the reference. The reference to Ticona clearly does not show a tubular component. Rather, the reference mentions

that the core components are injected later through the plastic center. Consequently, there are two locations which are exposed to the outside, i.e., the injection location and that location at which the later injected core component once again emerges from the outer skin after penetrating through the plastic core. If, as described in the last sentence of the specification of Ticona, the material of the outer skin is further injected in another step for closing the component, which means that the later injected material closes only the injection location, but not the discharge location. In other words, in order to make it possible that at most one location remains free exposed to the outside, a second injection process is required; in accordance with the present application, only one process is required. Once the connection between the fluid line and the container has been effected, the fluid line at least outwardly protects the injection location because this injection location is located remote from the surface of the first component 1 to be welded to the container 1. Of course, in actual practice, the fluid line is pushed much farther onto the tubular component, namely, past the holding rib 10. Consequently, the fluid line has the additional effect that any hydrocarbon fuel which may possibly diffuse through the possibly somewhat thinner inner skin layer of the first component 1 can exit as leakage at the connecting surface between the first and second components. Since the fluid line usually also contains a diffusion blocking layer, the fuel cannot

diffuse through the fluid line. Therefore, in the claimed component, no additional further injection processes are required in order to prevent that hydrocarbon fuel emerges to the outside during operation.

The European Patent Application EP 1 063 078 A2 of Rasmussen also does not come close to the subject matter of claim 1 of the present application. If one only looks at Figs. 5 and 6 of Rasmussen, the inner layer 1b is at the part 1 initially free at both ends (at the top and bottom in Figs. 5 and 6) wherein, however, it is not clear or disclosed which end is to serve as the injection location, while the lower end is only closed by an integral mounting of a second part 2 to which a third part 3 is welded, and wherein only the third part 3 is welded to the container. Consequently, the reference requires operational steps for obtaining a tubular component as it is obtained according to the teaching of new claim 1 already by a single additional injection of the core component into the skin component. By welding the part 1 and its layers 1a, 1b to the part 2, a reliably tight connection is frequently still not obtained in practice because incorrect welding is possible and at least one of the three components 1, 1b, and 1a is always manufactured from a diffusion-tight material which does not form a welded connection with the material of part 2, so that additionally a sealing ring 12 is provided at this location which in the long

term does also not ensure an absolutely leakage-tight connection; in addition, the sealing ring constitutes an additional structural element. At least, the entire structural component would not be injection molded in one piece from parts 1, 2 and 3, as it is now set forth in claim 1 of the application.

Even if the upper part composed of the components 1, 1b, and 1a by itself were to be considered the structural part to be welded to the container, an absolute tightness between the structural part and the container is not ensured for the same reasons discussed above. In amended claim 1, the tightness between the structural part and the container is ensured to a greater extent because none of the components is welded to the container which would not be compatible with the material of the container. In addition, Rasmussen once again would not disclose which end of the structural part consisting alone of the components 1, 1a, and, 1b is to serve as the injection location. Moreover, the material of the first component would not completely enclose the second component up to an injection location.

In the structural part according to German Patent Application DE 100 48 973 A1 of Werner, during operation always only a short leakage path is exposed to the outside, as seen in Figs. 1 and 3. In Fig. 4, the connecting surface is provided from

the injection location 2 to the edge 27 of the outer connecting surface between the non-compatible components 25 (PA) and 24 (HDPE); and in Fig. 5 from the injection point 22 to the edge 27 of the connecting surface.

Consequently, in all of the structural parts known from the references cited in the European application, to which the Examiner refers, a short leakage path is exposed to the outside only after the first additional injection step. In accordance with the solution of amended claim 1, if at all, only a very long leakage path is present between the two components 1, 2, wherein it must be observed that the fluid line covers the injection location 6 during operation. The fluid which flows through the structural part and is environmentally damaging, for example gasoline or diesel oil, can only enter at one location into a connecting surface between the two components and can only emerge again after a long detour through the second connecting surface located on the other side of the inner component 2 (core component); however, this is prevented by a fluid line. Moreover, the connecting surfaces of the first and second components are in practice not exactly flat, as it would appear in Figs. 2 and 3 of the present application. Rather, the surfaces are slightly wavy because the second component is injected into the molten core of the first component 1 which has previously been injected through the injection location 6 into the molten core of the first

component 1 which has been injected into the cavity of the molding tool. This occurs after the outer layer of the first component has cooled at the wall of the molding tool and has hardened. When injecting into the molten core of the first component, of which only that amount of material is injected into the cavity of the molding tool that cavity is not completely filled, the first component displaces the still molten material of the first component into the part of the cavity which has not yet been filled by the first component, wherein the molten materials of the core of the first component and the second component flow past each other and the contact surfaces between the two components are becoming slightly wavy, as is the case in all fluids of different densities which flow past each other, for example, the wind on the surface of the ocean wherein waves are generated on the surface of the ocean and also on the adjacent surface of the air, only that the waves in the air are not visible. As already mentioned, these waves are not illustrated in Figs. 1 and 2, but are always present in practice. These waves have the result that a labyrinth-type sealing effect is achieved by the enlargement of the contact surface, so that any leakage path is extended even further and the flow resistance against any leakage is increased.

Even though the two components do not form a molten connection with each other, compared to Ticona, Rasmussen, and

Werner, the present application results in a higher leakage density and because of the plastic material used as the second component also a very high diffusion blocking capability over practically the entire length of the tubular part.

As seen in Figs. 6 of Aoki, the structural part described in columns 7, lines 6 to 22, the cover 22 is of polyethylene (PE) which is not capable of blocking diffusion and a thin coating 94 of a material which is capable of blocking diffusion. However, the coating 94 only covers a small portion of the inner surface of the cover 92, so that fuel vapors from the fuel tank can diffuse into the atmosphere through a large portion of the cover 92.

In order to apply the blocking layer 94 in accordance with the method described in column 7, lines 15 to 22 of the reference, initially a primer must be applied onto the surface of the cover 92 and then an aqueous solution or alcohol solution of EVOH (ethyl vinyl alcohol), polyvinyl acetate (PVA) or polyamide (PA); this is complicated and cumbersome.

In the other method according to column 7, lines 23 to 27 of the reference, the cover 92 is to be coated with a blocking layer of EVOH, PVA or PA by the injection molding process. However, this method does not include any monosandwich or co-injection

methods, as they are used in the present application; rather, the diffusion blocking material is directly sprayed onto the same location where a blocking layer 94 has been applied with Fig. 6 of Aoki. The monosandwich or co-injection methods can only be used in an object which is symmetrical with respect to rotation, for example, as shown in Figs. 2 and 3 of the present application. The method cannot be used in an angular pipe piece as it is illustrated, for example, in Fig. 6 of Aoki; this is because the injected core material would not be distributed so uniformly in the skin material that the diffusion blocking material covers all required locations in the skin layer.

The reference to Kurihara also does not disclose in Fig. 3 that the diffusion blocking layer 10 has been injected into the olefin layer 50a; rather, the blocking layer is injected onto this layer 50a and another outer layer 50b which forms the pipe 1. It is very difficult and cumbersome to inject these three layers one above the other because this would require a complicated molding tool. Initially, the layer 10 would have to be manufactured in a first cavity of the molding tool by injection molding and the material would have to harden. Then the finished layer would have to be arranged in a second cavity of another or the same molding tool and the material of the layer 50a would have to be injected around it. After the layers 10 and 50a have been manufactured in this manner, both would have to be

arranged in a third cavity of the same or another molding tool and the material of the layer 50b would have to be injected around them.

In accordance with the present invention, on the other hand, only a molding tool with one cavity is required in which the entire tubular part can be formed. Therefore, it is respectfully submitted that the claims in the application over the art of record.

Therefore, in view of the foregoing, it is submitted that this application is now in condition for allowance and such allowance is respectfully solicited.

Any additional fees or charges required at this time in connection with the application may be charged to Patent and Trademark Office Deposit Account No. 11-1835.

Respectfully submitted,

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